



[4910-13-P]

**DEPARTMENT OF TRANSPORTATION**

**Federal Aviation Administration**

**14 CFR Part 39**

**[Docket No. FAA-2015-0249; Directorate Identifier 2014-NM-174-AD; Amendment 39-18393; AD 2016-03-06]**

**RIN 2120-AA64**

**Airworthiness Directives; The Boeing Company Airplanes**

**AGENCY:** Federal Aviation Administration (FAA), DOT.

**ACTION:** Final rule.

**SUMMARY:** We are superseding Airworthiness Directive (AD) 2012-18-05 for The Boeing Company Model DC-9-10, DC-9-20, DC-9-30, DC-9-40, and DC-9-50 series airplanes; and Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), MD-88, and MD-90-30 airplanes; equipped with a center wing fuel tank and Boeing original equipment manufacturer-installed auxiliary fuel tanks. AD 2012-18-05 required adding design features to detect electrical faults and to detect a pump running in an empty fuel tank. Since we issued AD 2012-18-05, we have determined that it is necessary to clarify the actions for airplanes on which the auxiliary fuel tanks are removed. This new AD allows certain actions as optional methods of compliance. This AD was prompted by our determination that it is necessary to clarify the actions for airplanes on which the auxiliary fuel tanks are removed. We are issuing this AD to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

**DATES:** This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

The Director of the Federal Register approved the incorporation by reference of certain publications listed in this AD as of [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

**ADDRESSES:** For service information identified in this final rule, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, CA 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; Internet <https://www.myboeingfleet.com>. You may view this referenced service information at the FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221. It is also available on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0249.

#### **Examining the AD Docket**

You may examine the AD docket on the Internet at <http://www.regulations.gov> by searching for and locating Docket No. FAA-2015-0249; or in person at the Docket Management Facility between 9 a.m. and 5 p.m., Monday through Friday, except Federal holidays. The AD docket contains this AD, the regulatory evaluation, any comments received, and other information. The address for the Docket Office (phone: 800-647-5527) is Docket Management Facility, U.S. Department of Transportation, Docket Operations, M-30, West Building Ground Floor, Room W12-140, 1200 New Jersey Avenue SE., Washington, DC 20590.

**FOR FURTHER INFORMATION CONTACT:** Sérj Harutunian, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Los Angeles Aircraft Certification Office (ACO), 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5254; fax: 562-627-5210; email: [serj.harutunian@faa.gov](mailto:serj.harutunian@faa.gov).

## **SUPPLEMENTARY INFORMATION:**

### **Discussion**

We issued a notice of proposed rulemaking (NPRM) to amend 14 CFR part 39 to supersede AD 2012-18-05, Amendment 39-17181 (77 FR 54793, September 6, 2012). AD 2012-18-05 applied to The Boeing Company Model DC-9-10, DC-9-20, DC-9-30, DC-9-40, and DC-9-50 series airplanes; and Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), MD-88, and MD-90-30 airplanes; equipped with a center wing fuel tank and Boeing original equipment manufacturer-installed auxiliary fuel tanks. The NPRM published in the Federal Register on March 26, 2015 (80 FR 15947). The NPRM was prompted by our determination that it is necessary to clarify the actions for airplanes on which the auxiliary fuel tanks are removed. The NPRM proposed to allow certain actions as optional methods of compliance. We are issuing this AD to correct the unsafe condition on these products.

### **Explanation of Revised Service Information**

The NPRM (80 FR 15947, March 26, 2015) specified Boeing Service Bulletin MD80-28-228, dated September 27, 2013; and Boeing Service Bulletin MD90-28-013, dated September 27, 2013; as the appropriate sources of service information for the required actions. Since the NPRM was published, both service bulletins have been revised and this AD now specifies Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015; and Boeing Service Bulletin MD90-28-013, Revision 1, dated August 27, 2015, as the source of appropriate service information for the required actions. Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015; and Boeing Service Bulletin MD90-28-013, Revision 1, dated August 27, 2015; both clarify the required actions and require enlarging holes and identifying a bracket.

## **Comments**

We gave the public the opportunity to participate in developing this AD. The following presents the comments received on the NPRM (80 FR 15947, March 26, 2015) and the FAA's response to each comment.

### **Support for the Comment**

Delta Air Lines supported the comments made by Boeing, which are discussed in the following paragraphs.

### **Request to Revise the Applicability**

Boeing requested that we revise paragraph (c) of the proposed AD (80 FR 15947, March 26, 2015). Boeing explained that the proposed AD should apply to the airplanes identified in paragraphs (c)(6) through (c)(8) of the proposed AD if they are equipped with center wing fuel tanks, and to airplanes identified in paragraphs (c)(1) through (c)(8) of the proposed AD if they are equipped with original equipment manufacturer-installed auxiliary fuel tanks. Boeing reasoned that DC-9 center wing fuel tanks are not affected by the proposed AD, and that the "fuel system reviews conducted by the manufacturer" (i.e., Boeing's SFAR 88 system safety assessments (SSA)) cited in paragraph (e) of the proposed AD concluded that center wing fuel tanks on Model DC-9 airplanes identified as paragraphs (c)(1) through (c)(5) of the proposed AD do not require the corrective actions cited in the NPRM. For airplanes with a CWT identified in paragraphs (c)(1) through (c)(5) of the proposed AD, the existing design features offer adequate protection relative to a pump running in an empty fuel tank and new design features added to the center tank fuel boost pump container address types of electrical faults cited in the NPRM.

Boeing expressed that the FAA had previously concurred with the related Boeing SSA findings and approved Boeing Service Bulletin DC9-28-216, dated March 18, 2008,

mandated by FAA AD 2009-03-03, Amendment 39-15804 (74 FR 8150, February 24, 2009), as corrective action for the electrical arc burn-through.

We agree to revise the applicability of this AD for the reasons stated by the commenter. We have revised paragraph (c) of this AD accordingly.

### **Request to Clarify Certain Optional Requirements**

Boeing requested that we revise paragraph (h)(1)(i) of the proposed AD (80 FR 15947, March 26, 2015) by adding the phrase, “and change fuel pump system wiring” after “install ground fault interrupter (GFI) relays.” Boeing reasoned that in addition to providing procedures for installing GFI relays, Boeing Service Bulletin MD80-28-228, dated September 27, 2013, also incorporates wiring changes to accommodate the GFI’s operation and revises low pressure indication system wiring for center wing and auxiliary fuel tank fuel pumps. The low pressure indication system wiring changes are required to address the potential of fuel pumps running for prolonged periods in empty tanks.

Boeing also requested that we revise paragraph (h)(2) of the proposed AD (80 FR 15947, March 26, 2015) by removing the phrase, “install brackets and mod block rails, and” and adding the phrase, “and change fuel pump system wiring.” Boeing reasoned that while Boeing Service Bulletin MD90-28-013, dated September 27, 2013, does specify installation of brackets and rails, as does Boeing Service Bulletin MD80-28-228, dated September 27, 2013, the primary changes that will address the unsafe condition are the GFI relay and wiring changes defined in Boeing Service Bulletin MD90-28-013, dated September 27, 2013. Boeing expressed that the brackets and rails can be omitted from the text of the NPRM, as they are referenced in the service information. Also, in addition to providing procedures for installing GFI relays, Boeing Service Bulletin MD90-28-013, dated September 27, 2013, also incorporates wiring changes to accommodate the GFI’s operation and revises low pressure indication system wiring for center wing and auxiliary fuel tank fuel pumps. Boeing stated that the low pressure indication system wiring

changes are required to address the potential of fuel pumps running for prolonged periods in empty tanks.

For the reasons stated by the commenter, we agree to revise paragraphs (h)(1)(i) and (h)(2) of this AD by incorporating the requested changes. As stated earlier, since the NPRM was published, both service bulletins have been revised and this AD now specifies Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015; and Boeing Service Bulletin MD90-28-013, Revision 1, dated August 27, 2015, as the appropriate sources of service information for the required actions.

#### **Request to Revise to the Latest Service Information**

Delta requested that we revise paragraph (h)(3) of the proposed AD (80 FR 15947, March 26, 2015) to include the latest service information. Delta noted that the proposed AD would require the incorporation of “Critical Design Configuration Control Limitations (CDCCLs), Airworthiness Limitations Instructions (ALIs), and short-term extensions specified in Appendixes B, C, and D of Boeing Special Compliance Item Report MDC-92K9145, Revision M” into the maintenance and inspection program. Delta noted, however, that the referenced report has been revised to Revision N, dated June 13, 2014, and it recommends that the restriction to Revision M be removed from the final rule.

For the reasons stated by the commenter, we have revised this AD to refer to the latest service information.

#### **Request for Credit for Previously Accomplished Installations**

Delta requested that we revise paragraph (k) of the proposed AD (80 FR 15947, March 26, 2015) to permit credit for previously accomplished installations for paragraph (h)(1)(i) or (h)(2) of the proposed AD. Delta reasoned that paragraph (h)(1)(i) of the proposed AD provides for the installation of GFI relays on Model MD-80 series airplanes (Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87),

and Model MD-88 airplanes) using the procedures in Boeing Service Bulletin MD80-28-228, dated September 27, 2013. And similarly, paragraph (h)(2) of the proposed AD provides for the installation of GFI relays on MD-90-30 airplanes in accordance with Boeing Service Bulletin MD9028-013, dated September 27, 2013. Delta explained that it has completed installation of GFI relays using the procedures in these two service bulletins on a portion of its fleet, and noted that there is no practical way to re-accomplish such modifications after the effective date of the final rule.

For the reasons given by the commenter, and the addition of the latest service information, we have provided credit for the applicable actions specified in paragraph (k) of this AD.

## **Conclusion**

We reviewed the relevant data, considered the comments received, and determined that air safety and the public interest require adopting this AD with the changes described previously. We have determined that these minor changes:

- Are consistent with the intent that was proposed in the NPRM (80 FR 15947, March 26, 2015) for correcting the unsafe condition; and
- Do not add any additional burden upon the public than was already proposed in the NPRM (80 FR 15947, March 26, 2015).

We also determined that these changes will not increase the economic burden on any operator or increase the scope of this AD.

## **Related Service Information under 1 CFR part 51**

We reviewed Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015; and Boeing Service Bulletin MD90-28-013, Revision 1, dated August 27, 2015. The service information describes procedures for installing GFI relays that change fuel pump system wiring, installing a low fuel pressure indication system, and enlarging holes and identifying a bracket.

We have also reviewed Boeing Twinjet Special Compliance Item Report MDC-92K9145, Revision N, dated June 13, 2014, including Appendices A through D. This service information details special compliance items (SCIs), critical design configuration control limitations (CDCCLs), airworthiness limitation instructions (ALIs), short-term extensions, and associated compliance intervals

Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015, specifies prior or concurrent accomplishment of the following service information.

- McDonnell Douglas MD-80 Service Bulletin 28-53, Revision 1, dated April 16, 1992, which describes procedures for installing a low fuel pressure indication system.
- McDonnell Douglas MD-80 Service Bulletin 28-63, Revision 2, dated April 8, 1992, which describes procedures for installing a low fuel pressure indication inhibit system.

This service information is reasonably available because the interested parties have access to it through their normal course of business or by the means identified in the ADDRESSES section.

### **Costs of Compliance**

We estimate that this AD affects 809 airplanes of U.S. registry.

We estimate the following costs to comply with this AD:



### Estimated costs

Action	Labor cost	Parts cost	Cost per product	Cost on U.S. operators
Installing design features for airplanes with center wing and auxiliary tanks (263 airplanes), using a method approved by the FAA [retained actions from AD 2012-18-05, Amendment 39-17181 (77 FR 54793, September 6, 2012)]	50 work-hours X \$85 per hour = \$4,250	\$35,000	\$39,250	\$10,322,750
Installing design features for airplanes with center wing tank (546 airplanes), using a method approved by the FAA [retained actions from AD 2012-1805, Amendment 39-17181 (77 FR 54793, September 6, 2012)]	35 work-hours X \$85 per hour = \$2,975	\$17,000	\$19,975	\$10,906,350

### Estimated costs: New optional actions for installing design features

Action	Labor cost	Parts cost	Cost per product
For airplanes with center wing and auxiliary tanks, using service information specified in paragraph (h) of this AD (including revising the maintenance/inspection program)	250 work-hours X \$85 per hour = \$21,250	\$69,000	\$90,250
For airplanes with center wing tank, using service information specified in paragraph (h) of this AD (including revising the maintenance/inspection program)	110 work-hours X \$85 = 9,350	\$30,000	\$39,350
Installing the supplemental type certificate (STC) specified in paragraph (i) of this AD	35 work-hours X \$85 per hour = \$2,975	\$17,000	\$19,975

### **Authority for this Rulemaking**

Title 49 of the United States Code specifies the FAA's authority to issue rules on aviation safety. Subtitle I, Section 106, describes the authority of the FAA Administrator. Subtitle VII, Aviation Programs, describes in more detail the scope of the Agency's authority.

We are issuing this rulemaking under the authority described in Subtitle VII, Part A, Subpart III, Section 44701, "General requirements." Under that section, Congress charges the FAA with promoting safe flight of civil aircraft in air commerce by prescribing regulations for practices, methods, and procedures the Administrator finds necessary for safety in air commerce. This regulation is within the scope of that authority because it addresses an unsafe condition that is likely to exist or develop on products identified in this rulemaking action.

### **Regulatory Findings**

We have determined that this AD will not have federalism implications under Executive Order 13132. This AD will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government.

For the reasons discussed above, I certify that this AD:

- (1) Is not a "significant regulatory action" under Executive Order 12866,
- (2) Is not a "significant rule" under DOT Regulatory Policies and Procedures (44 FR 11034, February 26, 1979),
- (3) Will not affect intrastate aviation in Alaska, and
- (4) Will not have a significant economic impact, positive or negative, on a substantial number of small entities under the criteria of the Regulatory Flexibility Act.

### **List of Subjects in 14 CFR Part 39**

Air transportation, Aircraft, Aviation safety, Incorporation by reference, Safety.

## **Adoption of the Amendment**

Accordingly, under the authority delegated to me by the Administrator, the FAA amends 14 CFR part 39 as follows:

### **PART 39 - AIRWORTHINESS DIRECTIVES**

1. The authority citation for part 39 continues to read as follows:

Authority: 49 U.S.C. 106(g), 40113, 44701.

#### **§ 39.13 [Amended]**

2. The FAA amends § 39.13 by removing Airworthiness Directive (AD) 2012-18-05, Amendment 39-17181 (77 FR 54793, September 6, 2012, and adding the following new AD:

**2016-03-06 The Boeing Company:** Amendment 39-18393; Docket No. FAA-2015-0249; Directorate Identifier 2014-NM-174-AD.

#### **(a) Effective Date**

This AD is effective [INSERT DATE 35 DAYS AFTER DATE OF PUBLICATION IN THE FEDERAL REGISTER].

#### **(b) Affected ADs**

This AD replaces AD 2012-18-05, Amendment 39-17181 (77 FR 54793, September 6, 2012).

#### **(c) Applicability**

This AD applies to The Boeing Company airplanes, certificated in any category, that are identified in paragraphs (c)(6) through (c)(8) of this AD and equipped with center wing fuel tanks; and those identified in paragraphs (c)(1) through (c)(8) of this AD that are equipped with Boeing original equipment manufacturer-installed auxiliary fuel tanks. For airplanes on which the auxiliary fuel tanks are removed, the actions specified for the auxiliary fuel tanks are not required.

(1) Model DC-9-11, DC-9-12, DC-9-13, DC-9-14, DC-9-15, and DC-9-15F airplanes.

(2) Model DC-9-21 airplanes.

(3) Model DC-9-31, DC-9-32, DC-9-32 (VC-9C), DC-9-32F, DC-9-33F, DC-9-34, DC 9 34F, and DC 9 32F (C-9A, C 9B) airplanes.

(4) Model DC-9-41 airplanes.

(5) Model DC-9-51 airplanes.

(6) Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), and DC-9-87 (MD-87) airplanes.

(7) Model MD-88 airplanes.

(8) Model MD-90-30 airplanes.

**(d) Subject**

Air Transport Association (ATA) of America Code 28, Fuel.

**(e) Unsafe Condition**

This AD was prompted by fuel system reviews conducted by the manufacturer. We are issuing this AD to reduce the potential of ignition sources inside fuel tanks, which, in combination with flammable fuel vapors, could result in fuel tank explosions and consequent loss of the airplane.

**(f) Compliance**

Comply with this AD within the compliance times specified, unless already done.

**(g) Retained Criteria for Operation, with New Compliance Time**

This paragraph restates the actions required by paragraph (g) of AD 2012-18-05, Amendment 39-17181 (77 FR 54793, September 6, 2012), with a new compliance time. Except as provided by paragraphs (h) and (i) of this AD: As of 42 months after the effective date of this AD, no person may operate any airplane affected by this AD unless an amended type certificate or supplemental type certificate that incorporates the design

features and requirements described in paragraphs (g)(1) and (g)(2) of this AD has been approved by the Manager, Los Angeles Aircraft Certification Office (ACO), FAA, and those design features are installed on the airplane.

(1) Each electrically powered fuel pump installed in the center wing tank or auxiliary fuel tank must have a protective device installed to detect electrical faults that can cause arcing and burn through the fuel pump housing. The same device must shut off the pump by automatically removing electrical power from the pump when such faults are detected. When a fuel pump is shut off as the result of detection of an electrical fault, the device must stay latched off until the fault is cleared through maintenance action and verified that the pump and the electrical power feed are safe for operation.

(2) Additional design features must be installed to detect when any center wing tank or auxiliary fuel tank pump is running in an empty fuel tank. The prospective pump shutoff system must shut off each pump no later than 60 seconds after the fuel tank is emptied. The pump shutoff system design must preclude undetected running of a fuel pump in an empty tank, after the pump was commanded off manually or automatically.

**(h) New Optional Methods of Compliance**

For Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and Model MD-88 airplanes; and Model MD-90-30 airplanes: In lieu of doing the requirements of paragraph (g) of this AD, do the applicable actions specified in paragraphs (h)(1), (h)(2), and (h)(3) of this AD.

(1) For Model DC-9-81 (MD-81), DC-9-82 (MD-82), DC-9-83 (MD-83), DC-9-87 (MD-87), and Model MD-88 airplanes: Do the applicable actions specified in paragraphs (h)(1)(i), (h)(1)(ii), and (h)(1)(iii) of this AD.

(i) For all airplanes identified in paragraph (h)(1) of this AD: Within the compliance time specified in paragraph (g) of this AD, install ground fault interrupter (GFI) relays and change fuel pump system wiring, in accordance with the

Accomplishment Instructions of Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015.

(ii) For airplanes identified in McDonnell Douglas MD-80 Service Bulletin 28-53, Revision 1, dated April 16, 1992: Prior to or concurrently with accomplishing the action specified in paragraph (h)(1)(i) of this AD, install a low fuel pressure indication system, in accordance with the Accomplishment Instructions of McDonnell Douglas MD-80 Service Bulletin 28-53, Revision 1, dated April 16, 1992.

(iii) For airplanes identified in McDonnell Douglas MD-80 Service Bulletin 28-63, Revision 2, dated April 8, 1992: Prior to or concurrently with accomplishing the action specified in paragraph (h)(1)(i) of this AD, install a low fuel pressure indication inhibition system, in accordance with the Accomplishment Instructions of McDonnell Douglas MD-80 Service Bulletin 28-63, Revision 2, dated April 8, 1992.

(2) For Model MD-90-30 airplanes: Within the compliance time specified in paragraph (g) of this AD, install GFI relays and change fuel pump system wiring, in accordance with the Accomplishment Instructions of Boeing Service Bulletin MD90-28-013, Revision 1, dated August 27, 2015.

(3) For all airplanes: Within 30 days after accomplishing the actions required by paragraph (h)(1) or (h)(2) of this AD or within 30 days after the effective date of this AD, whichever occurs later, revise the maintenance or inspection program, as applicable, to incorporate the Critical Design Configuration Control Limitations (CDCCLs), Airworthiness Limitation Instructions (ALIs), and Short-Term Extensions specified in Appendices B, C, and D of Boeing Twinjet Special Compliance Item Report MDC-92K9145, Revision N, dated June 13, 2014. The initial compliance time for accomplishing the actions specified in the ALIs is at the later of the times in paragraphs (h)(3)(i) and (h)(3)(ii) of this AD. Doing the revision of the maintenance or inspection program, as applicable, required by this paragraph terminates the requirements in

paragraphs (g) and (h) of AD 2008-11-15, Amendment 3915538 (73 FR 30746, May 29, 2008).

(i) At the applicable time specified in Appendix C of Boeing Twinjet Special Compliance Item Report MDC-92K9145, Revision N, dated June 13, 2014, except as provided by Appendix D of Boeing Twinjet Special Compliance Item Report MDC-92K9145, Revision N, dated June 13, 2014.

(ii) Within 30 days after accomplishing the actions required by paragraph (h)(1) or (h)(2) of this AD, or within 30 days after the effective date of this AD, whichever occurs later.

**(i) New Optional Universal Fault Interrupter (UFI) Installation**

In lieu of doing the requirements of paragraph (g) of this AD, within the compliance time specified in paragraph (g) of this AD install a TDG Aerospace Inc. UFI using a method approved in accordance with the procedures specified in paragraph (l) of this AD.

Note 1 to paragraph (i) of this AD: TDG Aerospace STC ST02502LA ([http://rgl.faa.gov/Regulatory\\_and\\_Guidance\\_Library/rgstc.nsf/0/4d132827a425d7de86257cd3004dfc02/\\$FILE/ST02502LA.pdf](http://rgl.faa.gov/Regulatory_and_Guidance_Library/rgstc.nsf/0/4d132827a425d7de86257cd3004dfc02/$FILE/ST02502LA.pdf)) provides additional guidance for installing the TDG UFI.

**(j) No Alternative Actions, Intervals, and CDCCLs**

After the maintenance or inspection program, as applicable, has been revised as required by paragraph (h)(3) of this AD, no alternative actions (e.g., inspections), intervals, or CDCCLs may be used unless the actions, intervals, or CDCCLs are approved as an alternative method of compliance (AMOC) in accordance with the procedures specified in paragraph (l) of this AD.

**(k) Credit for Previous Actions**

(1) This paragraph provides credit for the actions specified in paragraphs (h)(1)(ii) and (h)(1)(iii) of this AD, if those actions were performed before the effective date of this AD using any of the service information specified in paragraph (k)(1)(i), (k)(1)(ii), or (k)(1)(iii) of this AD, which are not incorporated by reference in this AD.

(i) McDonnell Douglas MD-80 Service Bulletin 28-53, dated April 8, 1991.

(ii) McDonnell Douglas MD-80 Service Bulletin 28-63, dated, June 14, 1991.

(iii) McDonnell Douglas MD-80 Service Bulletin 28-63, Revision 1, dated July 19, 1991.

(2) This paragraph provides credit for the actions specified in paragraphs (h)(1)(i) and (h)(2) of this AD, if those actions were performed before the effective date of this AD using Boeing Service Bulletin MD80-28-228, dated September 27, 2013; or Boeing Service Bulletin MD90-28-013, dated September 27, 2013, which are not incorporated by reference in this AD.

**(l) Alternative Methods of Compliance (AMOCs)**

(1) The Manager, Los Angeles Aircraft Certification Office (ACO), FAA, has the authority to approve AMOCs for this AD, if requested using the procedures found in 14 CFR 39.19. In accordance with 14 CFR 39.19, send your request to your principal inspector or local Flight Standards District Office, as appropriate. If sending information directly to the manager of the ACO, send it to the attention of the person identified in paragraph (m)(1) of this AD. Information may be emailed to: 9-ANM-LAACO-AMOC-Requests@faa.gov.

(2) Before using any approved AMOC, notify your appropriate principal inspector, or lacking a principal inspector, the manager of the local flight standards district office/certificate holding district office.



(3) An AMOC that provides an acceptable level of safety may be used for any repair, modification, or alteration required by this AD if it is approved by the Boeing Commercial Airplanes Organization Designation Authorization (ODA) that has been authorized by the Manager, Los Angeles ACO, to make those findings. To be approved, the repair method, modification deviation, or alteration deviation must meet the certification basis of the airplane and the approval must specifically refer to this AD.

(4) AMOCs approved for AD 2012-18-05, Amendment 39-17181 (77 FR 54793, September 6, 2012), are approved as AMOCs for the corresponding provisions of this AD.

**(m) Related Information**

(1) For more information about this AD, contact Sérj Harutunian, Aerospace Engineer, Propulsion Branch, ANM-140L, FAA, Los Angeles ACO, 3960 Paramount Boulevard, Lakewood, CA 90712-4137; phone: 562-627-5254; fax: 562-627-5210; email: serj.harutunian@faa.gov.

(2) Service information identified in this AD that is not incorporated by reference is available at the addresses specified in paragraphs (n)(3) and (n)(4) of this AD.

**(n) Material Incorporated by Reference**

(1) The Director of the Federal Register approved the incorporation by reference (IBR) of the service information listed in this paragraph under 5 U.S.C. 552(a) and 1 CFR part 51.

(2) You must use this service information as applicable to do the actions required by this AD, unless the AD specifies otherwise.

(i) Boeing Service Bulletin MD80-28-228, Revision 1, dated August 27, 2015.

(ii) Boeing Service Bulletin MD90-28-013, Revision 1, dated August 27, 2015.

(iii) Boeing Twinjet Special Compliance Item Report MDC-92K9145, Revision N, dated June 13, 2014, including Appendices A through D.

(iv) McDonnell Douglas MD-80 Service Bulletin 28-53, Revision 1, dated April 16, 1992.

(v) McDonnell Douglas MD-80 Service Bulletin 28-63, Revision 2, dated April 8, 1992.

(3) For Boeing service information identified in this AD, contact Boeing Commercial Airplanes, Attention: Data & Services Management, 3855 Lakewood Boulevard, MC D800-0019, Long Beach, CA 90846-0001; telephone 206-544-5000, extension 2; fax 206-766-5683; Internet <https://www.myboeingfleet.com>.

(4) You may view this service information at FAA, Transport Airplane Directorate, 1601 Lind Avenue SW., Renton, WA. For information on the availability of this material at the FAA, call 425-227-1221.

(5) You may view this service information that is incorporated by reference at the National Archives and Records Administration (NARA). For information on the availability of this material at NARA, call 202-741-6030, or go to:  
<http://www.archives.gov/federal-register/cfr/ibr-locations.html>.

Issued in Renton, Washington, on January 25, 2016.

Michael Kaszycki,  
Acting Manager,  
Transport Airplane Directorate,  
Aircraft Certification Service.

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